

Mohan Edirisinghe: List of Journal Publications as at Septemeber 2025

2025

Constrained Composite Bayesian Optimization for Rational Synthesis of Polymeric Particles

F.Wang, M.Parhizkar, A.Harker and M.Edirisinghe, *Digital Discovery*, accepted and in press.

A Battery Powered Approach to Pressurised Spinning: Introducing the Sustainability Concept and Shaping the Future of Fibre Production Methodologies

M.O.Aydogdu, A.Delbusso and M.Edirisinghe, *Applied Energy*, 397(2025)126331.

Optimising Fibre Morphology and Production Efficiency in Pressure Spinning through Vessel and Collector Design

M.Amarakoon, A.Delbusso, S.Homer-Vanniasinkam and M.Edirisinghe, *Materials & Design*, 256(2025)114348.

Next Generation Pressure Spinning Technology for Surgical Suture Manufacturing

E.Altun, A.Delbusso and M.Edirisinghe, *Materials & Design*, 256(2025)114326.

Manufacturing and Biological Potential of Saliva-Loaded Core-Sheath Pressure-Spun Polymeric Fibers

V.Thukral, N.Qosim, A.Kurniawan, M.Gültekinoğlu, H.M.T.U. Herath, G.R. Williams and M.Edirisinghe, *Macromolecular Mater. & Eng.*, 310(2025)2400403.

Controlling Microbubble Formation in Microfluidic Devices: Advancements in Experimental, Theoretical, and Numerical Strategies

A.H.Khan, A.Ganguli, M.Edirisinghe, S.V.Dalvi, *Applied Physics Reviews*, 12(2025)021306.

Harnessing Cow Manure Waste for Nanocellulose Extraction and Sustainable Small-structure Manufacturing

Y.Dai, D.Sun, D.O'Rourke, S.Velusamy, S.Sundaram and M.Edirisinghe, *J.Cleaner Production*, 509(2025)145530.

Ultrasound-assisted Microfluidics Based Microbubble Mediated Synthesis of Nanoparticle-reinforced Dual Porous Scaffolds for Tissue Regeneration

A.T.Guduru, D.Bhatia, M.Edirisinghe and S.Dalvi, *Biomaterials Advances*, 176(2025)214347.

Multifunctional Conductive Nanofibers for Self-Powered Glucose Biosensors
S.Gungordu Er, R.Bulathsinghala, S.B.Kizilates, B.Li, R.Ryan, T.A.Tabish,
I.Dharmasena and M.Edirisinghe, *Advanced Science*,12(2025)2416320.
[Work featured on the cover of the journal]

The Tailored Manufacturing of Core (cellulose acetate)-sheath
(polyvinylpyrrolidone) Polymeric Nanofibers for Biphasic Drug Delivery
Systems Using Pressure-spinning
N.Qosim, G.R.Williams and M.Edirisinghe, *Materials & Design*,
253(2025)113939.

Development of Electroconductive Polypyrrole-Polycaprolactone and Poly (3,
4-Ethylenedioxythiophene)-poly(Styrenesulfonate)-Polyethylene Oxide
Fibrous Scaffolds by Pressurised Gyration for Cardiac Tissue Engineering
Applications
J.G.O.Fernandez, M.Amarakoon, M.Edirisinghe and R.K.Matharu
Macromolecular Mater. & Eng.,310(2025)2500031.

Design Optimization of Pressurized Gyration Technology: Orifice Height Level
Effects on Production Rate and Fiber Morphology
A.Alneyadi, A.Delbusso, A.Harker and M.Edirisinghe, *Macromolecular Mater.
& Eng.*,310(2025)2400317.
[Work featured on the cover of the journal]

2024

Microfluidic Fabrication of Gelatin-Nano Hydroxyapatite Scaffolds for
Enhanced Control of Pore Size Distribution and Osteogenic Differentiation of
Dental Pulp Stem Cells
C.Bayram, S.Ozturk, B.Karaosmanoglu, M.Gultekinoglu, E.Z.Taskiran,
K.Ulubayram, H.Majd, J.Ahmed and M.Edirisinghe, *Macromol. Biosci.*, 24
(2024)2400279.

How Can Pressurized Gyration Revolutionize Drug Delivery?
Y.Dai and M.Edirisinghe, *Expert Opinion on Drug Del.*, 21(2024)1683-1687.

Valorization of Diverse Waste-derived Nanocellulose for Multifaceted
Applications: A Review
M.Ghamari, D.Sun, Y.Dai, C.H.See, H.Yu, M.Edirisinghe and S.Sundaram,
International Journal of Biological Macromolecules, 280(2024)136130.

Antibacterial Properties of Natural Cinnamon-alginate Fibrous Patches
Produced by Modified Nozzle-pressurized Spinning
Y.Dai, M.Gultekinoglu, C.Bayram, H.B.De Silva and M.Edirisinghe,
MedComm, 5(2024)e731.

Structure, Properties, Forming, and Applications of Alginate Fibers: A Review
N.Qosim, Y.Dai, G.R.Williams and M.Edirisinghe,
International Materials Reviews, 69(2024)309-333.

Cleaner and Sustainable Production of Core–Sheath Polymer Fibres
M.Amarakoon, A.Harker, S.Homer-Vanniasinkam and M.Edirisinghe,
Polymers, 16(2024)2357.

Design and Fabrication of Sustained Bacterial Release Scaffolds to Support
the Microbiome
A.M.Klein, N.Qosim, G.Williams, M.Edirisinghe, R.K.Matharu, *Pharmaceutics*,
16(2024)1066.

Tackling Data Scarcity Challenge through Active Learning in Materials
Processing with Electrospray
F.Wang, A.Harker, M Edirisinghe and M.Parhizkar, *Advanced Intelligent
Systems*, 6(2024)2300798.

Tailored Binary Polymer System PCL-PEO for Advanced Biomedical
Applications: Optimization, Characterization and *In Vitro* Analysis
A.Afshar, H.Majd, A.Harker and M.Edirisinghe, *J. Drug Delivery Sci.Tech.*,
95(2024)105582.

Biomedical Efficacy of Garlic-Extract-Loaded Core-Sheath Plasters for Natural
Antimicrobial Wound Care
H.Majd, M.Gultekinoglu, C.Bayram, B.Karaosmanoğlu, E.Z.Taşkıran, D.Kart,
Ö.D.Erol, A.Harker and M.Edirisinghe, *Macromolecular Mater. & Eng.*,
309(2024) 2400014.
[Work featured on the cover of the journal]

Hydrophilic and Hydrophobic Drug Release from Core (polyvinylpyrrolidone)-
Sheath (ethyl cellulose) Pressure-spun Fibers
N.Qosim, H.Majd, S.Huo, M.Edirisinghe and G.R.Williams, *Int. J.
Pharmaceutics*, 654(2024)123972.

High Dose Progesterone Loaded PCL-Polysorbate 80 Transdermal Fibers for
Potential Application in Gynecological Oncology
O.Shafi, S.Phadnis, U.H.Chan, M.Edirisinghe and F.Brako,
Macromolecular Mater. & Eng., 309(2024)2300447.

Making Fibers from Cellulose Derivatives by Pressurized Gyration and
Electrospinning
N.Qosim, H.Majd, J.Ahmed, G.Williams and M.Edirisinghe,
Cellulose,31(2024)2815-2832

A Bio-based Thermoplastic Polyurethane with Triple Self-healing Actions for
Wearable Technology and Smart Textiles
T.Griggs, J.Ahmed, H.Majd, M.Edirisinghe and B Chen, *Mater. Adv.*,
6(2024)6210-6221.

Facile Synthesis: from *Laminaria hyperborea* to Cellulose Films and Fibers
Y.Dai, D.Sun, S.Sundaram, A.Delbusso, D.O'Rourke, M.Dorris and
M.Edirisinghe, *Cellulose*, 31(2024)205-216.

Recent Developments in the Use of Centrifugal Spinning and Pressurized Gyration for Biomedical Applications
J.Ahmed, M.Gultekinoglu and M.Edirisinghe, *Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology*, 16(2024)e1916.

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Experimental and Computational Investigation of Microbubble Formation in a Single Capillary Embedded T-junction Microfluidic Device
A.H.Khan, A.Ganguli, M.Edirisinghe and S.V.Dalvi, *Langmuir*, 39(2023)18971-18982

Micro-and Nanomanufacturing for Biomedical Applications and Nanomedicine: A Perspective
F.Wang, A.Harker, M.Edirisinghe and M.Parhizkar, *Small Science*, 3(2023)2300039.

Pressure-Spun Fibrous Surgical Sutures for Localized Antibacterial Delivery: Development, Characterization, and In Vitro Evaluation
E Altun, C Bayram, M Gultekinoglu, R Matharu, A Delbusso, S.Homer-Vanniasinkam and M.Edirisinghe, *ACS Applied Materials & Interfaces*, 15(2023) 45561-45573

Nanofiber Based on Electrically Conductive Materials for Biosensor Applications
S.Gungordu Er, A.Kelly, S.B.W.Jayasuriya and M.Edirisinghe, *Biomedical Materials & Devices*, 1(2023) 664-679.

A Global Challenge: Sustainability of Submicrometer PEO and PVP Fiber Production
M.Amarakoon, S,Homer-Vanniasinkam and M.Edirisinghe, *Global Challenges*, 7(2023)2300152.

Sludge-derived Biochar: Physicochemical Characteristics for Environmental Remediation
N.Mayilswamy, A.Nighojkar, M.Edirisinghe, S.Sundaram and B. Kandasubramanian, *Applied Physics Reviews*, 10(2023)031308.

Casein Fibres for Wound Healing
J.Ahmed, E.Guler, G.Sinemcan Ozcan, M.Emin Cam, S.Homer-Vanniasinkam and M.Edirisinghe, *J. Royal Soc. Interface*, 20(2023)20230166.
[Work news-reported in national press etc, e.g. INDEPENDENT, see <https://www.independent.co.uk/news/health/protein-university-college-london-rats-b2381857.html>]

Pressurized Gyration: Fundamentals, Advancements, and Future
Y.Dai, J.Ahmed and M.Edirisinghe, *Macromolecular Mater. & Eng.*, 308(2023) 2300033.
[INVITED, work featured on the front cover of the journal]

Graphene-Based Nanocomposites as Antibacterial, Antiviral and Antifungal Agents

S.Gungordu Er, M.Edirisinghe and T.A.Tabish, *Adv.Healthcare Mater.*, 12(2023)2201523.

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Binary polymer systems for biomedical applications

A.Afshar, M.Gultekinoglu and M.Edirisinghe, *International Materials Reviews*, 68(2023)184-224.

Polysorbate Enhanced Progesterone Loaded Drug Diffusion from Macromolecular Fibrous Patches for Applications in Obstetrics and Gynaecology

O.Shafi, M.Edirisinghe and F Brako, *J. Drug Delivery Sci.Tech.*, 79(2023)104062.

2022

Antibacterial Properties of Honey Nanocomposite Fibrous Meshes

R.K.Matharu, J.Ahmed, J.Seo, K.Karu, M.A.Golshan, M.Edirisinghe and L. Ciric, *Polymers*, 14(2022)5155.

Co-delivery of Saxagliptin and Dapagliflozin by Electrosprayed Trilayer Poly (D, L-lactide-co-glycolide) Nanoparticles for Controlled Drug Delivery

Y.Zhang, A.H.Harker, C.J.Luo, M.Parhizkar and M.Edirisinghe, *Int. J. Pharmaceutics*, 628(2022)122279.

Antiviral Properties of Porous Graphene, Graphene Oxide and Graphene Foam Ultrafine Fibers against Phi6 Bacteriophage

S.Gungordu Er, T.A.Tabish, M.Edirisinghe and R.K.Matharu, *Frontiers in Medicine*, 9(2022)1032899.

Nanofiber Based on Electrically Conductive Materials for Biosensor Applications

S.Gungordu Er, A.Kelly, S.B.W.Jayasuriya and M.Edirisinghe, *Biomed.Materials & Devices*, 1(2022)664-679.

Environmental Impact of Polymer Fiber Manufacture

M.Amarakoon, H.Alenezi, S.Homer-Vanniasinkam and M.Edirisinghe, *Macromolecular Mater. & Eng.*, 307(2022)2200356.

Facile One-Step Synthesis of PVDF Bead-on-String Fibers by Pressurized Gyration for Reusable Face Masks

R.Huang, Y.Dai, J.Ahmed and M.Edirisinghe, *Polymers*, 14(2022)4498.

Nozzle-pressurized Gyration: A Novel Fiber Manufacturing Process

Y.Dai, J.Ahmed, A.Delbusso and M.Edirisinghe, *Macromolecular Mater. & Eng.*, 307(2022)2200268.

[Work featured on the cover of the journal]

Antimicrobial Fibrous Bandage-like Scaffolds Using Clove Bud Oil
C. von Thadden, E.Altun, M.Aydogdu, M.Edirisinghe and J.Ahmed,
*J.Functional Biomater.*13(2022),136.

Generating Lifetime-Enhanced Microbubbles by Decorating Shells with Silicon Quantum Nano-Dots Using a 3-Series T-Junction Microfluidic Device
B.Wu, C.J.Luo, A.Palaniappan, X.Jiang, M.Gultekinoglu, K.Ulubayram, C. Bayram, A.Harker, N.Shirahata, A.H.Khan, S.V.Dalvi and M.Edirisinghe,
Langmuir, 38(2022)10

Combining Ultrasound and Capillary-Embedded T-Junction Microfluidic Devices to Scale Up the Production of Narrow-Sized Microbubbles through Acoustic Fragmentation
A.H.Khan, X.Jiang, A.Kaushik, H.S.Nair, M.Edirisinghe, K.P.Mercado-Shekhar, H.Shekhar and S.V.Dalvi, *Langmuir*, 38(2022)10917-10933.

Sustainable Macromolecular Materials and Engineering
B.Chen, S.S.Ray and M.Edirisinghe, *Macromolecular Mater. & Eng.*,
307(2022)2200242.
[ISSUE EDITORIAL]

Manufacturing Cyclodextrin Fibers Using Water
A.Kelly, J.Ahmed and M.Edirisinghe, *Macromolecular Mater. & Eng.*,
307(2022)2100891.
[Work featured on the cover of the journal]

Optimised Release of Tetracycline Hydrochloride from Core-sheath Fibres Produced by Pressurised Gyration
H.Majd, A.Harker, M.Edirisinghe and M.Parhizkar, *J. Drug Delivery Sci.Tech.*,
72(2022)103359.

The Effect of Solvent and Pressure on Polycaprolactone Solutions for Particle and Fibre Formation
E.Altun, J.Ahmed, M.O.Aydogdu, A.Harker and M.Edirisinghe, *Euro.Polym.J.*,
173(2022)111300.

Antimicrobial Fibrous Bandage-like Scaffolds Using Clove Bud Oil
C. von Thadden, E.Altun, M.Aydogdu, M.Edirisinghe and J.Ahmed,
J.Functional Biomater. 13(2022)136.
[Featured paper]

Facile One-Pot Method for All Aqueous Green Formation of Biocompatible Silk Fibroin-Poly (Ethylene Oxide) Fibers for Use in Tissue Engineering
P.L.Heseltine, C.Bayram, M.Gultekinoglu, S.Homer-Vanniasinkam, K.Ulubayram and M.Edirisinghe, *ACS Biomater. Sci. Eng.*, 8(2022)1290-1300.

Severe Acute Respiratory Syndrome Type 2-Causing Coronavirus: Variants and Preventive Strategies
M.O.Aydogdu, J.L.Rohn, N.V.Jafari, F.Brako, S.Homer-Vanniasinkam and M.Edirisinghe, *Adv. Sci.*, 9(2022)2104495.
[Work featured on the cover of the journal]

Theme Issue on Coronavirus and Surfaces
M.Edirisinghe, *Interface Focus*, 12(2022)6th February.
[ISSUE EDITORIAL & FRONT COVER]

2021

Metal-based Nanoparticles for Combating Antibiotic Resistance
E.Altun, M.O.Aydogdu, E.Chung, G.Ren, S.Homer-Vanniasinkam and
M.Edirisinghe, *Applied Physics Reviews*, 8(2021)041303.
[Featured/Editor's picks]

Metformin-Loaded Polymer-Based Microbubbles/Nanoparticles Generated for
the Treatment of Type 2 Diabetes Mellitus
S.Cesur, M.E.Cam, F.S.Sayin, S.Su, A.Harker, M.Edirisinghe and O.Gunduz,
Langmuir, 38(2021)5040-5051.
[Work featured on the cover of the journal]

Enhancing In Vitro Stability of Albumin Microbubbles Produced Using
Microfluidic T-Junction Device
A.H.Khan, S.Surwase, X.Jiang, M.Edirisinghe and S.V.Dalvi, *Langmuir*,
38(2021)5052-5062.

Exploiting the Antiviral Potential of Intermetallic Nanoparticles
R.K.Matharu, Y-K.Cheong, G.Ren, M.Edirisinghe and L.Ciric, *Emergent
Materials*. <https://doi.org/10.1007/s42247-021-00306-2>

Core–sheath Polymer Nanofiber Formation by the Simultaneous Application
of Rotation and Pressure in a Novel Purpose-designed Vessel
H.Alenezi, M.E.Cam and M.Edirisinghe, *Applied Physics Reviews*,
8(2021)041412.
[Work featured on the cover of the journal and also Scilight]

Optimization of Process-Control Parameters for the Diameter of Electrospun
Hydrophilic Polymeric Composite Nanofibers
F.S.Alfares, E.Guler, H.Alenezi, M.E.Cam and M.Edirisinghe, *Macromolecular
Mater. & Eng.*, 306(2021)2100471.
[Work featured as a Frontispiece]

Vitamin D3/vitamin K2/magnesium-loaded Polylactic acid/tricalcium
phosphate/polycaprolactone Composite Nanofibers Demonstrated
Osteoinductive Effect by Increasing Runx2 via Wnt via Wnt/ β -catenin Pathway
E.Guler, Y.E.Baripoglu, H.Alenezi, A.Arikan, R.Babazade, S.Unal, G.Duruksu,
F.S.Alfares, Y.Yazir, F.N.Oktar, O.Gunduz, M.Edirisinghe and M.E.Cam,
International Journal of Biological Macromolecules, 190(2021)244-258.

Utilising Co-Axial Electrospinning as a Taste-Masking Technology for
Paediatric Drug Delivery
H.E.Abdelhakim, A.Coupe, C.Tuleu, M.Edirisinghe and D.Q.M.Craig,
Pharmaceutics 13(2021)1665.

Co-Axial Gyro-Spinning of PCL/PVA/HA Core-Sheath Fibrous Scaffolds for Bone Tissue Engineering

S.Mahalingam, C.Bayram, M.Gultekinoglu, K.Ulubayram, S.Homer-Vanniasinkam and M.Edirisinghe, *Macromol. Biosci.*, 21(2021)2100177.

[Work featured as a Frontispiece]

Harnessing Polyhydroxyalkanoates and Pressurized Gyration for Hard and Soft Tissue Engineering

P.Basnett, R.K.Matharu, C.S.Taylor, U.Illangakoon, J.I.Dawson, J.M.Kanczler, M.Behbehani, E.Humphrey, Q.Majid, B.Lukasiewicz, R.Nigmatullin, P.Heseltine, R.O.C.Oreffo, J.W.Haycock, C.Terracciano, S.E.Harding, M.Edirisinghe and I.Roy, *ACS Appl. Mater. & Interfaces*, 13(2021)32624-32639.

Alleviating the Toxicity Concerns of Antibacterial Cinnamon-polycaprolactone Biomaterials for Healthcare-related Biomedical Applications

J.Ahmed, M.Gultekinoglu, C.Bayram, D.Kart, K.Ulubayram and M.Edirisinghe *MedComm.*, 2(2021)236-246.

Perspective: Covid-19; Emerging Strategies and Material Technologies

J.Ahmed, H.Alenezi, U.Edirisinghe and M.Edirisinghe

Emergent Materials, 4(2021)3-8.

[INVITED for Special Issue: Intelligent emergent materials to combat COVID-19 pandemic]

A Novel Reusable Anti-COVID-19 Transparent Face Respirator with Optimized Airflow

H.Alenezi, M.E.Cam and M.Edirisinghe, *Bio-design and Manufacturing*, 4(2021)1-9.

Next-generation Antimicrobial Peptides (AMPs) Incorporated Nanofibre Wound Dressings

A.Afshar, E.Yuca, C.Wisdom, H.Alenezi, J.Ahmed, C.Tamerler and M.Edirisinghe, *Medical Devices & Sensors*, 4(2021)e10144.

Accelerated Diabetic Wound Healing by Topical Application of Combination Oral Antidiabetic Agents-loaded Nanofibrous Scaffolds: An In Vitro and In Vivo Evaluation Study

M.E.Cam, B.Ertas, H.Alenezi, A.N.Hazar-Yavuz, S.Cesur, G.S.Ozcan, C.Ekentok, E.Guler, C.Katsakouli, Z.Demirbas, D.Akakin, M.S.Eroglu, L.Kabasakal, O.Gunduz and M. Edirisinghe, *Mater. Sci. Eng. C*, 119(2021)111586.

Surface Interactions and Viability of Coronaviruses

M.O.Aydogdu, E.Altun, E.Chung, G.Ren, S.Homer-Vanniasinkam, B.Chen and M.Edirisinghe, *J.Roy. Soc. Interface*, 18(2021)20200798.

[HEADLINE REVIEW]

Wholly Biobased, Highly Stretchable, Hydrophobic, and Self-healing Thermoplastic Elastomer
Y.Nurhamiyah, A.Amir, M.Finnegan, E.Themistou, M.Edirisinghe and B.Chen
ACS Appl. Mater. & Interfaces,13(2021)6720-6730.

Composite nanoclay-hydroxyapatite-polymer fiber scaffolds for bone tissue engineering manufactured using pressurized gyration
K.Kundu, A.Afshar, D.R.Katti, M.Edirisinghe and K.S.Katti, *Composites Science and Technology*, 202(2021)108598.

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Current Methodologies and Approaches for the Formation of Core–sheath Polymer Fibers for Biomedical Applications
S.Mahalingam, R.Matharu, S.Homer-Vanniasinkam and M. Edirisinghe, *Appl. Phys. Rev.*, 7(2020)041302.

[INVITED FEATURED ARTICLE: Work news-reported in UPI on 14th October 2020 and many other news agencies]

Porous Graphene Composite Polymer Fibres
J.Ahmed, T.A.Tabish, S.Zhang and M.Edirisinghe, *Polymers*,13(2020)76.

Novel Antibiotic-loaded Particles Conferring Eradication of Deep Tissue Bacterial Reservoirs for the Treatment of Chronic Urinary Tract Infection
W.K.Lau, D.Dharmasena, H.Horsley, N.V.Jafari, J.Malone-Lee, E.Stride, M.Edirisinghe and J.L.Rohn, *J.Control. Release*, 328(2020)490-502.

Rapid and Label-free Detection of COVID-19 Using Coherent Anti-Stokes Raman Scattering Microscopy
T.A.Tabish, R.J.Narayan and M. Edirisinghe, *MRS Communications*, 10(2020)566-572.

A Novel Treatment Strategy for Preterm Birth: Intra-vaginal Progesterone-loaded Fibrous Patches
M.E.Cam, A.N.Hazar-Yavuz, S.Cesur, O.Ozkan, H.Alenezi, H.T.Sasmazel, M.S.Eroglu, F.Brako, J.Ahmed, L.Kabasakal, G.Ren, O.Gunduz and M. Edirisinghe, *Int. J. Pharmaceutics*, 588(2020)119782.

Effectiveness of Oil-layered Albumin Microbubbles Produced using Microfluidic T-junctions in Series for *In Vitro* Inhibition of Tumor Cells
A.H.Khan, X.Jiang, S.Surwase, M.Gultekinoglu, C.Bayram, I.Sathisaran, Dhiraj Bhatia, J.Ahmed, B.Wu, K.Ulubayram, M. Edirisinghe and S.V.Dalvi, *Langmuir*, 36(2020)11429-11441.

Generation of Core–sheath Polymer Nanofibers by Pressurised Gyration
S.Mahalingam, S.Huo, S.Homer-Vanniasinkam and M.Edirisinghe, *Polymers*,12(2020)1709.
[Work featured on the cover of the journal and in Polymers Cover Paper Promotion Project]

The Comparision of Glybenclamide and Metformin-loaded Bacterial Cellulose/gelatin Nanofibres Produced by a Portable Electrohydrodynamic Gun for Diabetic Wound Healing
M.E.Cam, M.Crabbe-Mann, H.Alenezi, A.N.Hazar-Yavuz, B.Ertas, C.Ekentak, G.S.Ozcan, F.Topal, E.Guler, Y.Yazir, M.Parhizkar and M. Edirisinghe, *Eur. Polym. J.*, 134(2020)109844.

Viral Filtration Using Carbon-Based Materials
R.K.Matharu, H.Porwal, B.Chen, L.Ciric and M. Edirisinghe
Medical Devices & Sensors, 3(2020)e10107.

Poly(Caprolactone)-Poly(N-Isopropyl Acrylamide)-Fe₃O₄ Magnetic Nanofibrous Structure with Stimuli Responsive Drug Release
S.Gholami, S.Labbaf, A.Kermanpur A.B.Houreh Chaojie Luo, M. Edirisinghe and H.N.Esfahani, *Macromolecular Mater. & Eng.*, 305(2020)2000208.

Comparative Study of the Antimicrobial Effects of Tungsten Nanoparticles and Tungsten Nanocomposite Fibres on Hospital Acquired Bacterial and Viral Pathogens
R.K.Matharu, L.Ciric, G.Ren and M. Edirisinghe, *Nanomaterials*, 10(2020)10061017.

Microstructure of Fibres Pressure-spun from Polyacrylonitrile–graphene oxide Composite Mixtures
A.Amir, H.Porwal, S.Mahalingam, X.Wu, T.Wu, B.Chen, T.A.Tabish and M. Edirisinghe, *Composites Science and Technology*, 197(2020)108214.

Bacterial Cellulose Micro-nano Fibres for Wound Healing Applications
J.Ahmed, M.Gultekinoglu and M. Edirisinghe, *Biotechnology Advances*, 41, July–August(2020)107549.

A Portable Device for the Generation of Drug-Loaded Three-Compartmental Fibers Containing Metronidazole and Iodine for Topical Application
F.Brako, C.J.Luo, R.K.Matharu, L.Ciric, A.Harker, M. Edirisinghe and D.Q.M. Craig, *Pharmaceutics*, 12(2020)373.

Microstructure and Antibacterial Efficacy of Graphene Oxide Nanocomposite Fibres
R.K.Matharu, T.A.Tabish, T.Trakoolwilaiwan, J.Mansfield, J.Moger, T.Wu, C.Lourenço, B.Chen, L.Ciric, I.P.Parkin and M. Edirisinghe
Journal of Colloid and Interface Science, 571(2020)239-252.

Self-assembled Micro-stripe Patterning of Sessile Polymeric Nanofluid Droplets
M.Gultekinoglu, X.Jiang, C.Bayram, H.Wu, K.Ulubayram and M. Edirisinghe
Journal of Colloid and Interface Science, 561(2020)470-480.

Evaluation of Burst Release and Sustained Release of Pioglitazone-loaded Fibrous Mats on Diabetic Wound Healing: an *In vitro* and *In vivo* Comparison Study

M.E.Cam, S.Yildiz, H.Alenezi, S.Cesur, G.S.Ozcan, G.Erdemir, U.Edirisinghe, D.Akakin, D.S.Kuruca, L.Kabasakal, O.Gunduz and M.Edirisinghe, *J. Royal Soc. Interface*, 17(2020)20190712.

Enhanced Efficacy in Drug-resistant Cancer Cells through Synergistic Nanoparticle Mediated Delivery of Cisplatin and Decitabine

M.Parhizkar, P.J.T.Reardon, A.H.Harker, R.J.Browning, E.Stride, R.B.Pedley, J.C.Knowles and M.Edirisinghe, *Nanoscale Advances* 2(2020)1177-1186.

2019

Biofabrication of Gelatin Tissue Scaffolds with Uniform Pore Size via Microbubble Assembly

C.Bayram, X.Jiang, M.Gultekinoglu, S.Ozturk, K.Ulubayram and M.Edirisinghe, *Macromolecular Mater. & Eng.*, 34(2019)1900394.

[Work featured on the cover of the journal]

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